NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

TREE/SHRUB ESTABLISHMENT

(Ac.)

CODE 612

DEFINITION

Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.

PURPOSE

Establish woody plants for:

- forest products such as timber, pulpwood, and energy biomass
- wildlife habitat
- long-term erosion control and improvement of water quality
- treating waste
- storing carbon in biomass
- energy conservation
- improving or restoring natural diversity
- enhancing aesthetics.

CONDITIONS WHERE PRACTICE APPLIES

Tree/shrub establishment can be applied on any appropriately prepared site where woody plants can be grown.

CRITERIA

General Criteria Applicable to All Purposes

Composition of species will be adapted to site conditions and suitable for the planned purpose(s).

Species considered locally invasive or noxious shall not be used.

Planting or seeding rates will be adequate to accomplish the planned purpose for the site.

Planting dates, and care in handling and planting of the seed, cuttings or seedlings will ensure that planted materials have an acceptable rate of survival.

Only viable, high-quality and adapted planting stock or seed will be used.

A precondition for tree/shrub establishment is appropriately prepared sites. Refer to practice standard Tree/Shrub Site Preparation, 490.

Adequate seed sources or advanced reproduction needs to be present or provided for when using natural regeneration to establish a stand.

Selection of planting technique and timing will be appropriate for the site and soil conditions.

The acceptability and timing of coppice regeneration shall be based on species, age and diameter.

The planting will be protected from plant and animal pests and fire.

Each site will be evaluated to determine if mulching, supplemental water or other cultural treatments (e.g., tree protection devices, shade cards, brush mats) will be needed to assure adequate survival and growth.

Additional Criteria for Treating Waste

Species used to treat waste shall have fast growth characteristics, extensive root systems, high nutrient uptake capacity and tolerance of the planned effluent.

Additional Criteria for Improving or Restoring Natural Diversity

Composition of species selected for planting or those favored for natural regeneration will be native to the site and create a successional

stage or state that can progress to the potential natural plant community.

Additional Criteria for Storing Carbon in Biomass

The species and plant communities that attain biomass more quickly will sequester carbon faster. The rate of carbon sequestration is enhanced as trees and/or shrubs mature and soil organic matter increases. Select plants that have higher rates of growth and potential for carbon sequestration in biomass and are adapted to the site. Plant species at the appropriate stocking rate for the site.

CONSIDERATIONS

Priority should be given to plant materials that have been selected and tested in tree/shrub improvement programs. All plant materials should comply with minimum standards such as those as established by the American Nursery and Landscape Association, Forest Service, or state-approved nursery.

Caution should be used in planting Russian olive. It is an introduced species and has been declared a noxious weed in many areas. Russian olive is especially invasive in riparian environments.

Plans for landscape and beautification plantings should consider foliage color, season and color of flowering, and mature plant height.

Consider using species which best meet local wildlife needs.

Tree/shrub arrangement and spacing should allow for and anticipate the need for future access lanes for purposes of stand management.

Residual chemical carryover should be evaluated prior to planting and alter species selection and/or timing of planting/seeding.

When possible, transplant seedlings before bud break in the spring. Fall transplants should be placed during or after leaves turn, but well before hard frost conditions.

Consider mulches that will not rob nitrogen from the ground. e.g. course bark, weed barrier fabric. Use caution with rock mulches in areas where extreme heat is a factor.

Consider fall applications for direct seeding to mimic natural processes and allow for natural seed stratification over winter.

Avoid mid to late summer application of fertilizer to minimize heat stress and allow seedlings and small transplants time to harden off before fall.
When underplanting, trees should be planted sufficiently in advance of overstory removal to ensure full establishment.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

Access by vehicles or equipment during or after tree/shrub establishment shall be controlled to protect new plants and minimize erosion, compaction and other site impacts. Refer to the standard Use Exclusion, 472.

The trees and shrubs will be inspected periodically and protected from adverse impacts including insects, diseases or competing vegetation, fire and damage from livestock or wildlife.

If needed, competing vegetation will be controlled until the woody plants are established. Noxious weeds will be controlled. Replanting will be required when survival is inadequate.

Supplemental water will be provided as needed.

Periodic applications of nutrients may be needed to maintain plant vigor.

After trees and/or shrubs are established, pruning may be needed for subsequent management.

Practice Service Life: 15 years

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